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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,284	03/23/2006	Michael Nicolai	VO-751	9430

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EXAMINER

HOFFBERG, ROBERT JOSEPH

ART UNIT	PAPER NUMBER
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2835

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/573,284	Applicant(s) NICOLAI ET AL.	
	Examiner Robert J. Hoffberg	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 12-20 is/are rejected.
- 7) ☒ Claim(s) 2-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/30/06</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Specification

1. The disclosure is objected to because of the following informalities: page 3, line 12, "(in accordance with claim 3)" should be deleted from the specification.

Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sealing element (17) (claim 2), feed line (claims 9 and 18) return line (claims 9 and 18), rapid coupling devices (claims 10 and 19) and cooling conduit structures (claims 11 and 20) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "13" has been used to designate both vertical profiled frame element and the venting opening and "24" has been used to designate both fan unit and the fan.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 1-20 are objected to because of the following informalities: "the front" lacks antecedent basis (claim 1), "a lateral surface...which extends vertically with respect to the front" (claim 1) uses the front as reference but fails to disclose within the claim the location of the front within switch gear and "an area" (claim 1) is understood by the examiner that the cooling device is installed adjacent to a lateral surface of the switchgear cabinet.
6. Claims 5 and 14 are objected to because of the following informalities: the partial components lack antecedent basis. The examiner understands a partial component to be a part of the cooling module. Appropriate correction is required.
7. Claims 11 and 20 are objected to because of the following informalities: the electrical installations and electrical-built-ins are #31. It is understood by the examiner that "electrical installations" should be "the electrical built-ins" which has antecedent basis in claim 1.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 12, 15 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Chu et al. (US 6,775,137).

Chu et al. teach a device arrangement with at least one switchgear cabinet (13s) and one cooling device (21s), wherein the switchgear cabinet has a closed interior (Col. 3, lines 57-59) in which electrical built-ins (12) are housed, the cooling device is installed in an area of a lateral surface (10 side with 21) of the switchgear cabinet which extends vertically with respect to a front (Fig. 8b, side of 10 adjacent to 21) and at least over a portion of the height (see Fig. 8b) of the switchgear cabinet, and is in spatial connection with the interior through at least one air inlet (14) and at least one venting opening (15), and wherein the cooling device has a receiving chamber (perimeter of 21s) with in which at least one heat exchanger (21) is housed, the device arrangement comprising: the receiving chamber of the cooling device divided at least partially into two or more partial receiving chambers (perimeter of individual sections of 21), arranged vertically on top of each other (see Fig. 8b), and a cooling module (21) housed in at least one of the partial receiving chambers (claim 1), the cooling module has a heat

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exchanger unit (21) and at least one fan unit (11) as separate components (claim 12), wherein on a side (Col. 5, line 53) facing away from the switchgear cabinet the cooling device is sealingly closed off by a wall element (28) (claim 15) and wherein the cooling device has a feed line (41) and a return line (42) through which coolant is conveyed, and the cooling modules are connectible (see Fig. 8a) to the feed lines and the return lines (claim 18).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 19-20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (US 6,775,137)

With respect to Claim 19, Chu et al. disclose the claimed invention except the feed lines and the return lines have rapid coupling devices. Official Notice is taken that it is well known in the art that to have quick disconnect devices on fluid lines. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device arrangement of Chu et al. to connect the fluid and return lines to the facility lines with quick disconnect devices to permit quicker field serviceability without tools.

With respect to Claim 20, Chu et al. disclose the claimed invention including wherein the electrical built-ins are server units (Col. 1, line 21) having cooling conduit

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structures (13) extending in a direction of the switchgear cabinet interior, and the venting opening (16) of the cooling conduit structure (13) is assigned to the rear (near 32) of the switchgear cabinet, and the air inlet (14) is assigned to an area of the front (near 31) of the switchgear cabinet (claim 20). Chu et al. fail to disclose that venting opening is assigned to the front and the air inlet is assigned to an area of the rear. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the front and rear of the switchgear cabinet, making the vent opening is assigned to the front and the air inlet assigned to an area of the rear, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (US 6,775,137) in view of Butler (US 4,123,129).

Chu et al. disclose the claimed invention except the cooling device has a rack. Butler teaches has a rack put together from horizontal and vertical profiled frame elements (12, 14) connected with each other in corners of the rack, compartment floors (22) are horizontally fastened on the rack for dividing the partial receiving chamber, and the modules (66) are positionable on the compartment floors (claim 13). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device arrangement of Chu et al. with the rack of Butler for the purpose of to allow for expandability and efficient servicing of modules positionable in the rack.

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13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (US 6,775,137) in view of Butler (US 4,123,129) as applied to claim 13 above, and further in view of Koltuniak et al. (US 3,749,981).

Chu et al. in view of Butler disclose the claimed invention except the cooling module and a partial components has a structural width less than a clear opening dimension between the two vertical profiled frame elements at a front of the rack. Koltuniak et al. teach that the cooling module (Fig. 9, 24) and a partial components (100) has a structural width less than a clear opening dimension between the two vertical profiled frame elements (vertical corner members of 120) at a front (120 right side) of the rack (120). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device arrangement of Chu et al. in view of Butler with opening of Koltuniak et al. to allow for flexibility, expandability and efficient servicing of modules positionable in the rack (Col. 8, line 37-38).

14. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (US 6,775,137) in view of Koltuniak et al. (US 3,749,981).

Chu et al. disclose the claimed invention except the cooling device is installed between two switchgear cabinets. Koltuniak et al. teach that the cooling device is installed between two switchgear cabinets (142s), and the partial receiving chambers (144) are selectively brought into an air-conducting connection with the interior chambers (see Fig. 10) of at least one of the switchgear cabinets (claim 16), at least one of the cooling modules is in spatial connection with both interiors of the switchgear cabinets via air inlets and venting openings (see Figs. 9, 10 and 11, vents on 22 near 36

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and 38 for airflow) (claim 17). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device arrangement of Chu et al. in view of Butler with opening of Koltuniak et al. to allow for a single cooling device to cool multiple switchgear cabinets.

Allowable Subject Matter

15. Claims 2-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and for the claim objections above (claims 5 and 11).

16. The following is a statement of reasons for the indication of allowable subject matter: Claims 2 and all claims dependent thereof are allowable over the art of record because the prior art does not teach or suggest that wherein on a side facing the switchgear cabinet, the partial receiving chambers are closed by a cover, the cover forms the air inlet and the at least one venting opening, and a sealing element arranged on an outside of the cover between the air inlet and the venting opening prevents a short circuit of the air. The aforementioned limitations in combination with all remaining limitations of the respective claims are believed to render said claims 7 and all claims dependent thereof patentable over art of record.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chu et al. (US 6,924,81) is a continuation of Chu et al. (US 6,775,137). Immel et al. (US 6,962,191) discloses a heat exchanger module with a

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sealing element on a outside between the air inlet and the vent opening. Reinhard (DE 3405243 A1) disclose a slide-in cooling module having a heat exchanger and a fan for cooling a switchgear cabinet.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Hoffberg whose telephone number is (571) 272-2761. The examiner can normally be reached on 8:30 AM - 4:30 PM Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached on (571) 272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL DATSKOVSKIY
PRIMARY EXAMINER

RJH 4/11/07 *RJH*

Robert J. Hoffberg